

Upper Rapidan Watershed
Total Maximum Daily Load (TMDL) Implementation Plan
Agricultural & Residential Working Group Meeting
PVCC Eugene Giuseppe Center, Stanardsville
Thursday, April 16, 2015, 6-8 p.m.

Attendees:

Kyle Ashmun, Ecosystem LLC
Jenny Biche', Rappahannock-Rapidan Regional Commission
Robert Bradford, Culpeper Soil and Water Conservation District Director and Orange County farmer
Henny Calloway, Culpeper Soil and Water Conservation District
Ashleigh Cason, Culpeper Soil and Water Conservation District
Michelle Edwards, Rappahannock-Rapidan Regional Commission
Byron Petrauskas, Blue Ridge Environmental Solutions
Robert E. Runkle, Culpeper Soil and Water Conservation District Board and Greene County farmer
Rex Rexrode, National Resources Conservation Service
Rebecca Shoemaker, Virginia Department of Environmental Quality
May Sligh, Virginia Department of Environmental Quality
Alan Spivey, Citizen
Greg Wichelns, Culpeper Soil and Water Conservation District
Spencer Yager, Culpeper Soil and Water Conservation District

Welcome & Introductions

May Sligh welcomed attendees and distributed handouts.

AGRICULTURAL WORKING GROUP DISCUSSION

Byron Petrauskas provided an overview of practices/programs handout and requested feedback from attendees on the various topics addressed, beginning with land use. Attendees responded with the following comments and questions:

- A lot of hay fields and timber tracts have been converted into crop land over the last five years.
- There has been an increase in poultry farms. Many are new, but some are existing operations that are expanding (i.e. three operations in Orange County).

- There is evidence of intensive horse grazing in the watershed, many new horse rescue organizations where the average ratio of horse per acre is 10 to 1.
- When asked if manure composting and/or rotational grazing practices should be included in the TMDL-IP, attendees stated that some horse managers would use manure composters, but to really make progress, education targeting horse owners is needed. In the past, Virginia Cooperative Extension, Piedmont Environmental Council, Virginia Grasslands and Forage Council, and Soil and Water Conservation Districts have offered educational programs and hosted events targeting horse owners, but had very little attendance. Virginia Grasslands and Forage Council found that integrating the educational component into an event promoting a well-known horse professional helped reach more horse owners. It was further stated, that any direct outreach to horse owners should be conducted by a professional horse person.
- While many horse farms do not allow horses to have direct access to streams, runoff is a significant issue that needs to be addressed. Little to no buffers exist, the soil is badly compacted exacerbating runoff, and often the manure pile is placed close to tributaries.
- It was recommended that DEQ & DCR partner with state equine organizations such as the Virginia Horse Council. However, it should be noted that many equine organizations are very fragmented; broken down by specific breeds and disciplines (dressage, reining, racing, etc.) and it may be difficult to reach all of them. Both mass outreach from the state-level and local one-on-one grassroots outreach may be needed.
- Many horse owners may not be the highest priority when prioritizing BMP outreach strategies. However, those with very high stocking rates and poor forage management should be targeted.
- Many horse owners do not seem to understand that they are a contributing source of bacteria and may be adding to the stream's bacteria impairment.
- Creative partnerships are an important part of every TMDL IP. Many partnerships currently exist between the various conservation agencies, Virginia Cooperative Extension and producer groups. Virginia Cooperative Extension may be a good partner to assist with outreach to the equine industry. While Virginia Tech does not currently have an Equine Specialist on staff, Extension Agents are quite knowledgeable. Relationships between Extension Agents and horse owners may need to be established, however. Other partnerships with established equine groups could be considered.
- Much of the farmland in the region is leased, both farmland and cropland. It does not impact participation in the cost-share programs, because lessees are eligible provided they have 10-year lease at minimum.

- There are a lot of absentee landowners in the watershed, but there is usually a tenant that can be worked with.
- When asked if there are opportunities in the Upper Rapidan to improve stream buffers, attendees replied that there are, but that not all farmers may be willing to participate in the cost share programs. It was recommended that farmers with no stream buffers be targeted first with information, focusing on those areas of the stream that are most affected on their property.
- As you move further up the watershed, it becomes harder to get participation with stream buffers, because the farmer loses a lot of land. To address this issue, attendees recommended that much smaller setbacks be required for those areas and that DEQ/DCR consider a no setback BMP for the farmers with many small tributaries needing fencing.
- A discussion began about flash grazing in buffers. This practice had been allowed in the past but is not currently included in the state BMP specification for fencing. Someone stated there had been an abuse of the system in the past - some producers were not closing gates and removing animals from the buffer after flash grazing. When asked if requiring a management plan would help, attendees again reiterated that some farmers would continue to disregard the limited grazing requirements and therefore DCR was very unlikely to approve the flash grazing practice again (*note: the SL-6T, SL-6AT, LE-1T, LE-2T and WP-2T cost shared practices all require a Grazing Plan and Operations and Maintenance plan.*) When staff conducted spot checks, some gates to the exclusion fencing and cross fencing were open and there was very little grazing management being implemented. The end result was that farmers spent the cost-share money but were not complying with the agreements and so the full benefit of the buffer was not being realized in a few isolated situations.
- The Virginia Forage and Grassland Council will be offering a grazing mentoring program that will include the entire state. It will include information on soil retention, nutrient management, electric fencing, definition of flash grazing, etc. It was recommended this information be shared with Soil and Water Conservation Districts and VA Cooperative Extension.
- When asked if there were any suggestions on how to provide outreach to farmers, attendees replied that information is best shared one on one through recognized local government staff with the Soil and Water Conservation District, NRCS and Virginia Cooperative Extension who have experience and knowledge in farming practices and have the existing relationships with producers and producer groups. Visibility is the key and trust is needed.
- A generational shift is occurring where children and grandchildren of farmers, who recognized the damage that poor farming practices create and who helped develop organizations such as Soil and Water Conservation Districts, are not aware of how their farming practices are affecting the soil,

water and environment. Many farmers think because they do no-till farming, they do not need to implement other conservation practices.

- When asked if running programs on local television shows like Virginia Farming would be helpful, attendees agreed that it has been done in the past and would be helpful.
- When asked if there are other partnerships missing, the Conservation District referenced all of its current relationships with government agencies and producer groups, including but not limited to Virginia Farm Bureau and the Central Virginia Cattleman's Association. Other grazing groups were suggested for inclusion. The Culpeper SWCD sends an annual mailing to the Farm Bureau's mailing list, and expects to continue this. Attendees also recommended that education and outreach programs be targeted to the Virginia Cooperative Extension, large animal vets, horse owners and farriers.
- Paying the taxes on the cost-share money received was a barrier to one attendee, due to the large bill during the first year until depreciation occurs. Attendees inquired whether a tax credit may be developed if a long-term maintenance agreement was included. An attendee suggested conservation easements as a potential tax credit avenue, while another pointed out that many farmers do not want the paperwork and legal hassle involved. *Currently, there are 60 tax credit BMPs available in the VACS program.*

Attendees were asked to fill out a form ranking agricultural BMPs from 1-7 according to those they felt would be the most helpful practice and what would be the least helpful. They also ranked obstacles to BMP installation. Here are the results:

Ranking of potential best management practices for consideration:

Please rank the practices included in the table below (7 total) with 1 being the highest priority practice (one that you feel is most applicable in the area) and 7 being the very lowest priority (one that you feel is the least applicable to area farms)

Best management practice	Description	Rank (1-7)
Streamside livestock exclusion fencing	Excluding livestock from streams with fencing, providing alternative water sources or limited access points to the stream	1
Rotational grazing	Establishing a series of grazing paddocks with cross fencing and rotating livestock to maximize forage production while preventing overgrazing	3.6

Forested streamside buffers	Planting trees and shrubs in strips (35 foot minimum) along streams adjacent to pasture and cropland	3.7
Grassed streamside buffers	Planting grasses in strips (35 foot minimum) along streams adjacent to pasture and cropland)	3.7
Forestation of crop, pasture or hayland	Convert existing pasture, crop or hayland to forest (hardwood or conifers)	5.6
Continuous no-till	Cropland is planted and maintained using no-till methods, only effective in reducing bacteria for cropland receiving manure applications (not commercial fertilizer)	5.3
Manure composting/storage facilities (equine) or other animal waste storage facilities (dairy, beef, poultry)	Construction of planned system designed to manage solid equine waste from areas where horses are concentrated either through composting or storage OR animal waste storage lagoons for dairy, beef cattle or poultry	5.1

Ranking of obstacles to streamside livestock exclusion:

In order to address the bacteria problem in the Upper Rapidan River watershed, livestock will have to be excluded from the stream. In order to identify the best way to accomplish this, it's important to understand the obstacles to fencing livestock out. Please rank the following obstacles to fencing livestock out of streams 1-5 with 1 being the most common and relevant obstacle to address and 5 being the least common or relevant obstacle.

Obstacle	Rank (1-5)
The cost of installing fencing and off stream water is too high, even with cost share assistance from federal and state programs	3.3
Cannot afford to give up the land for a 35 foot buffer	1.3
General maintenance of fencing is time consuming and expensive	2.9

Grazing land is rented with short term leases and landowners are not interested in installing and/or maintaining streamside fencing and off stream water	4.3
People do not trust the government and do not want to work through state and federal cost share programs to installing fencing systems	4

Other: One write-in mentioned that **tax implications** were his number 1 concern

Byron provided an aerial map of the watershed via PowerPoint presentation showing where exclusion fencing exists and where it is needed. Attendees were asked to review the map and provide comments. A handout was provided listing the costs and estimates of what BMPs are needed for the TMDL-IP. Attendees responded with the following comments and questions:

- Culpeper Soil and Water Conservation District is contracting with the state to verify BMP data from the mid-1990's, and will then be used to update the Chesapeake Bay TMDL model. The data should be available next year and could be incorporated into the Upper Rapidan TMDL-IP.
- When asked if a lot of farms are being sold in the watershed, attendees responded no but some sales are happening. It becomes a problem for cost-share implementation when some of the family members are interested in conservation practices, while others want to sell the farm or subdivide it.
- May pointed out that funding for the TMDL-IP development is not tied to a particular sub-watershed, but to the entire Upper Rapidan watershed. It is important to include recommended practices and quantities by sub-watershed, as is shown in the various tables for both residential and agricultural BMPs, as it may help in targeting where to begin implementation.
- Attendees pointed out that SL-6 will be decreasing once 100% cost-share ends. Byron responded that it will not have a bearing on the TMDL-IP because it will use average costs.

Attendees were asked to send their comments to DEQ after reviewing all of the materials provided at the meeting.

An inquiry was made as to whether the data shown in the Tables would be used for the TMDL-IP with regard to the various BMP practices, as the 100% cost-share for SL-6 will be reduced to 80% in the future. Byron replied that the current data displayed in the tables would be used for the TMDL-IP's and then adjusted as needed during the implementation phase. Other sources of funding will be researched to help address the 20% reduction, an example being the Krebsner Fund which assisted with the Upper Hazel TMDL-IP.

RESIDENTIAL WORKING GROUP DISCUSSION

The group reviewed the residential practices and programs handout. May stated that a lot of good information on the residential component was collected at the Government Working Group meeting where staff from the Virginia Department of Health participated. Attendees responded to the list of questions on the handout with the following comments and questions:

- Generally homeowners in the watershed are aware they have a septic system, but while most know that maintenance should be done, they do nothing until they experience a problem. A lot of people do not know that maintenance can extend the life septic systems.
- When asked about the best way to reach homeowners, CSWCD staff recommended going door-to-door and speaking one-on-one. Word-of-mouth in residential subdivisions has been very effective. CSWCD provides educational brochures to the homeowners and distributes the information through various venues (handout was provided). Churches and the Health Department were especially helpful in getting the word out. Information is also printed in local newspapers and signs are displayed at homeowners houses when a cost-share program is being implemented, helping to bring awareness to neighbors and the community. The CSWCD, NRCS and Virginia Cooperative Extension agricultural staff has also been helpful in referring farmers to the residential cost-share programs. In the Upper Hazel IP several septic systems were installed due to information provided by NRCS.
- Many homeowners do not know where their septic tank is, and it can be embarrassing to admit they have a problem. Incentives to help address the problem can help mitigate that.
- Rental properties can be a hot spot for septic issues, because of renters flushing undesirable “flushable” products that are not made for septic systems. Attendees expect to see an increase in failing septic systems in the future due to this issue since disposable products are marketed as being septic system friendly.
- Many homeowners are hesitant to seek help for fear of a VDH violation and possibly opening the door to higher costs if VDH requires substantial repairs.
- It was recommended that a septic tank pump out program not be limited to homes within a certain distance from the stream (*currently pump-outs are not limited to homes within a certain distance of a stream*). It would be difficult to market a pump-out program when half of the audience is ineligible. When homeowners are told they are not eligible, they often tell their friends and neighbors, spreading negative publicity to potentially eligible homeowners. It was recommended that areas near streams be targeted instead of limiting cost-share to these areas.

- Attendees felt there was more of an issue of grey water in the watershed than straight pipes. Examples include horse stables washing horse blankets, homeowners with washers and dryers in the basement below the septic system running grey water to a floor drain.
- It was recommended 100% cost-share be considered for low-income homeowners needing septic systems, particularly those near streams. Partnerships with other agencies, such as Rural Development, could be developed to make this possible, if DEQ does not want to provide the full 100%.
- There are currently some alternative waste treatment systems attendees were aware of in Orange County, where there are many unbuildable lots with poor soils that don't perk. Attendees felt the systems were fairly new, so were not aware of any maintenance problems but thought it was possible in the future as the systems age.
- When asked about pet waste stations, attendees recommended focusing on kennels and hunt clubs rather than towns and parks. There are many kennels and hunt clubs, including fox hunting, in Orange and Madison counties. Greene and Madison Counties had once required residents with a certain number of dogs to get a kennel license, and would have that data available. A portion of the Town of Orange, which is included in the Upper Rapidan watershed, may also have popular dog walking areas in need of pet waste bag stations.
- HOWS (Houses of Wood and Straw, a non-profit serving confined outdoor dogs with houses and straw in winter), was recommended to assist with outreach for pet waste programs, such as educational brochures and leash bag holders.
- Attendees recommended that pet waste stations be placed at parking lots and entrances to the Shenandoah National Park such as White Oak Canyon and Old Rag.
- Attendees discussed bio-retention, rain gardens and infiltration trenches and recommended they be included in phase 2. It could help address runoff from concentrations of domestic pets (dogs & cats) and serve as an alternative to picking up after ones pet, possibly.

After completing all the questions for the Residential Working Group, Byron asked a few more questions regarding agriculture:

- How prevalent are cover crops? Attendees stated that they are widely used, both traditional and harvestable, and are steadily increasing.
- Which BMPs take up most of CSWCD's time? CSWCD staff replied 100% livestock exclusion and cover crops.

- Attendees also commented that crop farmers growing right up to the edge of the stream, with no grass buffer, is a major issue, although this practice is not necessarily related to bacteria impairments.